

Claims

1. A communication network for transporting calls, comprising:

a plurality of switching nodes (3), each switching node (3) containing routing means (31; 33; 41; 51) for routing calls through said communication network;

service provision means (35, 72, 71, 8) for providing predetermined services in said communication network, where at least a part (35) of said service provision means (35, 72, 71, 8) is provided in at least one of said plurality of switching nodes, said service provision means (35, 72, 71, 8) being arranged to provide at least one service according to which said service provision means (35, 72, 71, 8) are able to set up calls in said at least one switching node in response to the request of a user of said at least one service, and said service provision means (35, 72, 71, 8) being arranged to add user identification information to the call data of a call set up by said service provision means (35, 72, 71, 8), said user identification information identifying said user of said service requesting that a call be set up.

2. A communication network according to claim 1, further comprising call interception means (32; 34; 42; 52) for performing a call interception operation on a call in said communication network in response to detecting

predetermined interception trigger information in the call data of a call.

3. A communication network according to claim 2, wherein said call interception means (32; 34; 42; 52) is arranged to be able to detect said user identification information as said interception trigger information.
4. A communication network according to claim 2, wherein a respective call interception means (32; 34; 42; 52) is provided in association with each routing means (31; 33; 41; 51) in each of said plurality of switching nodes.
5. A communication network of claim 4, wherein said call interception means (32; 34; 42; 52) is provided as part of said routing means (31; 33; 41; 51).
6. A communication network according to claim 2, wherein said call interception means (32; 34; 42; 52) contains a memory means for storing said interception triggering information, and is arranged to communicate with an interception management means (6), such that said interception management means (6) provides said call interception means with the interception trigger information and controls the content of said memory means.
7. A communication network according to claim 6, wherein said call interception means (32; 34; 42; 52) is arranged such that said call interception operation comprises sending data from an intercepted call to said interception management means (6).

8. A communication network according to claim 2, wherein said call interception means (32; 34; 42; 52) is arranged such that said call interception operation comprises establishing a three-way conference call for an intercepted call, where one of the destinations is the origin of the call, one is the one or more physical destinations specified in the call, and one is a monitoring agency.
9. A communication network according to claim 1, wherein said service provision means (35, 72, 71, 8) comprise
- a service switching means (35) provided in a switching node of said network for detecting service triggering information in a call,
  - a service control means (72) that is arranged to communicate with said service switching means (35), such that said service switching means (35) notifies said service control means upon detecting service triggering information in a call and said service control means (72) instructs said service switching means (35) how to proceed with said call containing said service triggering information and provides said service switching means (35) with said user identification information.
10. A communication network according to claim 9, further comprising
- a service data means (71) for storing data on provided services and data on users subscribing to specific services, and

- a service management means (8) for managing which services are provided and for controlling the writing of data into said service data means (71).

11. A communication network according to claim 1,  
wherein said service provision means (35, 72, 71, 8) are furthermore arranged to add service identification information to the call data of a call being set up by said service provision means (35, 72, 71, 8), said service identification information identifying the service that said user requesting that a call be set up has invoked.
12. A communication network according to claim 1,  
wherein said service provision means (35, 72, 71, 8) comprise a service data means (71), in which user data associated with users of provided services and service data associated with provided services are stored, said service provision means (35, 72, 71, 8) being arranged such that a user has access to at least a part of the user data associated with him and may change said user data to which he has access.
13. A communication network according to claim 12, wherein said service provision means (35, 72, 71, 8) further comprise a service switching means (35) provided in a switching node of said network for detecting service triggering information in a call, and a service control means (72) that is arranged to communicate with said service switching means (35) and said service data means (71), where said service switching means (35) notifies said service control means upon detecting service triggering information in a call and said service

control means (72) instructs said service switching means (35) how to proceed with said call containing said service triggering information and provides said service switching means (35) with said user identification information, and where said user has access to said at least part of his user data via said communication network and said service switching means (35).

14. A communication network according to claim 12, wherein said service provision means (35, 72, 71, 8) is arranged to communicate with a computer network, and where said user has access to said at least part of his user data via said computer network.
15. A communication network according to claim 14, wherein said computer network is the Internet.
16. A communication network according to claim 12, wherein said service provision means (35, 72, 71, 8) are arranged to provide a monitoring agency continuous access to user data of selected users.
17. A communication network according to claim 12, wherein said service provision means (35, 72, 71, 8) are arranged to perform a user data change interception operation in response to a user changing his user data.
18. A communication network according to claim 1, said communication network comprising call interception means (32; 34; 42; 52) for performing a call interception operation on a call in said communication network in response to detecting predetermined

interception trigger information in the call data of said call, said call interception means (32; 34; 42; 52) being arranged to be able to detect said user identification information as said interception trigger information and having a memory means for storing said interception trigger information,

said service provision means (35, 72, 71, 8) comprising a service data means (71), in which user data associated with users of provided services and service data associated with provided services are stored, said service provision means (35, 72, 71, 8) being arranged such that a user has access to at least a part of the user data associated with him and may change said user data associated with him to which he has access, and said service provision means (35, 72, 71, 8) being arranged to perform a user data change interception operation in response to a user changing his user data,

where said user data change interception operation comprises sending user identification information associated with the user who changed his user data to the call interception means (32; 34; 42; 52), and said call interception means (32; 34; 42; 52) being arranged to compare said user identification information with interception trigger information stored in said memory means and sending a user data change message to a monitoring agency if said user identification information matches with a piece of interception trigger information stored in said memory means.

19. A communication network according to claim 18,

wherein said user data change message contains information on the user who changed his user data and information at least on the changes performed.

20. A communication network according to claim 1,

said communication network comprising call interception means (32; 34; 42; 52) for performing a call interception operation on a call in said communication network in response to detecting predetermined interception trigger information in the call data of said call, said call interception means (32; 34; 42; 52) being arranged to be able to detect said user identification information as said interception trigger information and having a memory means for storing said interception trigger information, and is arranged to communicate with an interception management means (6), such that said interception management means (6) provides said call interception means (32; 34; 42; 52) with the interception trigger information and controls the content of said memory means,

said service provision means (35, 72, 71, 8) comprising a service data means (71), in which user data associated with users of provided services and service data associated with provided services are stored, said service provision means (35, 72, 71, 8) being arranged such that a user has access to at least a part of the user data associated with him and may change said user data associated with him to which he has access, and said service provision means (35, 72, 71, 8) being arranged to perform a user data change interception operation in response to a user changing his user data,

where said user data change interception operation comprises sending user identification information associated with the user who changed his user data to the interception management means (6), and said interception management means (6) being arranged to compare said user identification information with interception trigger information stored in said interception management means (6) and sending a user data change message to a monitoring agency if said user identification information matches with a piece of interception trigger information stored in said interception management means (6).

21. A communication network according to claim 20, wherein said user data change message contains information on the user who changed his user data and information at least on the changes performed.
22. A communication network according to claim 1, wherein the format of the call data for a call being transported through said communication network is specified by a predetermined call data protocol and said call data protocol specifies fields for predetermined types of call data and fields which are not used by said call data protocol.
23. A communication network according to claim 22, wherein said service provision means (35, 72, 71, 8) adds said user identification information to said call data by manipulating data in a field specified for predetermined types of call data.

24. A communication network according to claim 23, wherein said call data protocol specifies a format and field for user identification information.
25. A communication network according to claim 22, wherein said service provision means (35, 72, 71, 8) adds said user identification information to said call data by manipulating data in a field not used by said call data protocol.
26. A method of arranging a service provision means (35, 72, 71, 8) providing predetermined services in a communications network for transporting calls, said communication network having a plurality of switching nodes, each switching node containing routing means (31; 33; 41; 51) for routing calls through said communication network, said method comprising:
- providing at least a part (35) of said service provision means (35, 72, 71, 8) in at least one of said plurality of switching nodes,
- arranging said service provision means (35, 72, 71, 8) to provide at least one service according to which said service provision means (35, 72, 71, 8) are able to set up calls in said at least one switching node in response to the request of a user of said at least one service, and
- arranging said service provision means (35, 72, 71, 8) to add user identification information to the call data of a call set up by said service provision means (35, 72, 71, 8), said user identification information

identifying said user of said service requesting that a call be set up.

27. A communication network for transporting calls, comprising:

a plurality of switching nodes, each switching node containing routing means (31; 33; 41; 51) for routing calls through said communication network;

service provision means (35, 72, 71, 8) for providing predetermined services in said communication network, said service provision means (35, 72, 71, 8) comprising a service data means (71) in which user data associated with users of provided services and service data associated with provided services are stored, said service provision means (35, 72, 71, 8) being arranged such that a user has access to at least a part of the user data associated with him and may change said user data to which he has access, wherein said service provision means (35, 72, 71, 8) are arranged to provide a monitoring agency continuous access to user data of selected users, or to perform a user data change interception operation in response to a user changing his user data.

28. A communication network according to claim 27, wherein said service provision means (35, 72, 71, 8) further comprise a service switching means (35) provided in a switching node of said network for detecting service triggering information in a call, and a service control

means (72) that is arranged to communicate with said service switching means (35) and said service data means (71), where said service switching means (35) notifies said service control means upon detecting service triggering information in a call and said service control means (72) instructs said service switching means (35) how to proceed with said call containing said service triggering information and provides said service switching means (35) with said user identification information, and where said user has access to said at least part of his user data via said communication network and said service switching means (35).

29. A communication network according to claim 27, wherein said service provision means (35, 72, 71, 8) is arranged to communicate with a computer network, and where said user has access to said at least part of his user data via said computer network.

30. A communication network according to claim 29, wherein said computer network is the Internet.

31. A communication network according to claim 27,

said communication network comprising call interception means (32; 34; 42; 52) for performing a call interception operation on a call in said communication network in response to detecting predetermined interception trigger information in the call data of said call, said call interception means (32; 34; 42; 52) being arranged to be able to detect user identification information that identifies users of services provided by said service provision means (35, 72, 71, 8) as said

interception trigger information and having a memory means for storing said interception trigger information,

where said user data change interception operation comprises sending user identification information associated with the user who changed his user data to the call interception means (32; 34; 42; 52), and said call interception means (32; 34; 42; 52) being arranged to compare said user identification information with interception trigger information stored in said memory means and sending a user data change message to a monitoring agency if said user identification information matches with a piece of interception trigger information stored in said memory means.

32. A communication network according to claim 31, wherein said user data change message contains information on the user who changed his user data and information at least on the changes performed.

33. A communication network according to claim 27,

said communication network comprising call interception means (32; 34; 42; 52) for performing a call interception operation on a call in said communication network in response to detecting predetermined interception trigger information in the call data of said call, said call interception means (32; 34; 42; 52) being arranged to be able to detect identification information that identifies users of services provided by said service provision means (35, 72, 71, 8) as said interception trigger information, and having a memory means for storing said interception trigger information,

and is arranged to communicate with an interception management means (6), such that said interception management means (6) provides said call interception means (32; 34; 42; 52) with the interception trigger information and controls the content of said memory means,

where said user data change interception operation comprises sending user identification information associated with the user who changed his user data to the interception management means (6), and said interception management means (6) being arranged to compare said user identification information with interception trigger information stored in said interception management means (6) and sending a user data change message to a monitoring agency if said user identification information matches with a piece of interception trigger information stored in said interception management means (6).

34. A communication network according to claim 33, wherein said user data change message contains information on the user who changed his user data and information at least on the changes performed.